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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,732	04/09/2004	Toshiharu Tanaka	107350-00008	9011

7590 07/03/2007  
ARENT FOX (NIKAIDO, MARMELSTEIN, MURRAY & ORAM)  
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WASHINGTON, DC 20036-5339

EXAMINER
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JOHNSTON, PHILLIP A

ART UNIT	PAPER NUMBER
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2881

MAIL DATE	DELIVERY MODE
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07/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/820,732

Applicant(s)

TANAKA ET AL.

Examiner

Phillip A. Johnston

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Detailed Action***

1. This Office Action is submitted in response to the Amendment filed 3-28-2007, wherein claims 1,7, and 8 have been amended. Claims 1-8 are pending.

***Examiners Response to Arguments***

2. Applicants arguments are moot in view of new grounds for rejection necessitated by the applicant's amendment.

***Claims Rejection - 35 U.S. C. 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA)

4. Claims 1-3,7, and 8 are rejected under 35 U.S.C. 102 (e) as being anticipated by Sogard, U.S. Patent No. 6,529,260.

5. Regarding claim 1, Sogard teaches wafer process chamber 10, including electron beam illumination source 90 (irradiating part) mounted in the center of optical assembly 24, which is o-ring sealed to the top of container 100

(assembly 24 thus acts as an upper lid for closing an opening in container 100), as shown in Figure 1 below. Support assembly 12 includes frame assembly 34, elevator 36 for raising and lowering optical assembly (upper lid) 24, and pivot assembly 38.

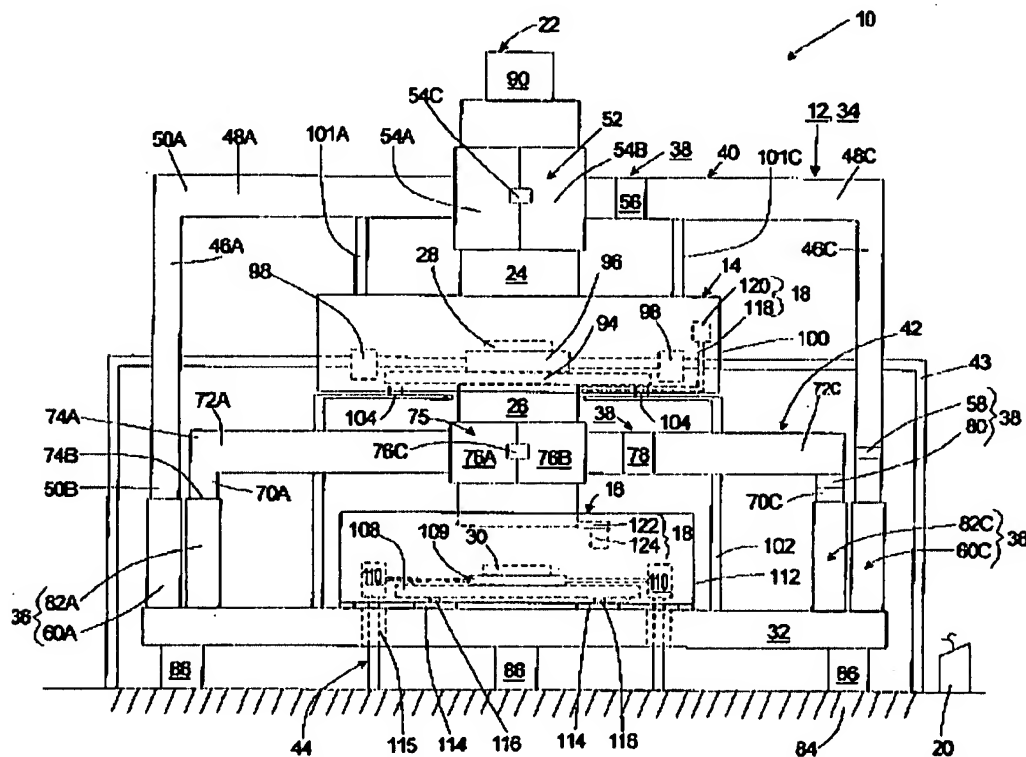


Fig. 1

6. Regarding claim 2, Sogard teaches in Figure 1 above that the opening for sealing optical assembly 24 to container 100 is positioned on top of the container. In addition the elevator assembly 36 is used to selectively lift and move some or all of the frame assembly 34 relative to the isolation base 32, thus portions of elevator assembly 36 must be inherently disposed on the upper side of chamber 10. Col. 7, line 55-64.

7. Regarding claim 3, Sogard teaches that each elevator 60A-60C raises optical assembly 24 (the lid) with a worm gear assembly (the power conversion mechanism) that is turned manually or with a motor (the driving source). Col. 8, line 28-41.

8. Regarding claim 7, Sogard also teaches the use of a wafer stage for holding a wafer for exposure. See substrate 30 in Figure 1 above, and Col. 3, line 59-67.

9. Regarding claim 8, Sogard teaches selectively raising the upper lid and container, which allows for relatively easy access to the subassemblies for service, maintenance and adjustment of the exposure apparatus 10. Col. 5, line 31-51.

### ***Claims Rejection – 35 U.S.C. 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,602,349 to Sogard.

12. Regarding claims 4-6, Sogard teaches the use of an elevator mechanism having tubular members 46A-46C, 48A and 48B in Figure 1 above.

13. Sogard fails to teach vertically extending tubes are acting as covers for threaded assemblies.

14. The examiner has determined from Figure 1 above that tubular members 46A-46C cover the elevator 36 worm gear (threaded) assemblies. Note 60A-60C in Figure 1 above; and Col. 8, line 27-63. In addition, the tubular members are rotated. See Col. 5, line 50-67; Col. 6, line 11-21; and Col. 7, line 19-27.

15. Therefore it would have been obvious to one of ordinary skill to cover the threaded, rotatable mechanisms with tubular members in accordance with Sogard to guard against contaminants from falling into the components of the exposure apparatus.

### ***Conclusion***

16. The Amendment filed on 3-28-2007 has been considered but the arguments are moot in view of new grounds for rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

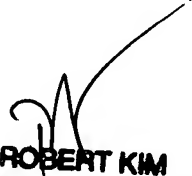
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications should be directed to Phillip Johnston whose telephone number is (571) 272-2475. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor Robert Kim can be reached at (571) 272-2293. The fax phone number for the organization where the application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJ

June 12, 2007

  
**ROBERT KIM**  
SUPERVISORY PATENT EXAMINER